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ABSTRACT

Funding for proposed community college facilities in California is based on a method which applies recognized space and utilization standards to expected future instructional activity as expressed by weekly student contact hours (WSCH), the product of student enrollment estimates, and expected future instructional loads. Until 1974, official projections of enrollment and WSCH were based on applying participation rates and grade progression ratios to counts of recent high school graduates. However, changing enrollment patterns and increasing participation by students of all ages have made accurate projection by this method increasingly difficult. To solve this problem, the old projection techniques have been replaced with a new age participation model which uses the entire population rather than just high school graduates as a projection base. Projected WSCH on which the 1974 bond program was based contains 17 district projections under the new technique and the remainder under the old technique. The 1975 projection will be based on the new technique. This document describes in detail both the bond program projection technique and the new age participation technique, briefly describes six alternative methods of enrollment projection, and gives graphs and tables of the results of such enrollment projections. (Author/NHM)

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ENROLLMENT PROJECTIONS

Analysis in Relation to Community College Capital Outlay Bond Proposal

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Background

Proposed Community College facilities to be funded by the bond program are based on a detailed review of proposed projects which applies recognized space and utilization standards to expected future instructional activity. The latter is expressed by weekly student contact hours (WSCH), the product of student enrollment estimates and expected future instructional loads - WSCH per student.

Official projections of enrollment and WSCH are prepared by the Department of Finance. Until this year, these projections were based upon applying participation rates and grade progression ratios to counts of recent high school graduates. The technique has underestimated actual Community College enrollment by about 5% for each of the past two years. Changing enrollment patterns among students and increasing participation by individuals of all ages makes accurate projections increasingly difficult.

To solve this problem, the Department of Finance is replacing the old projection technique with a new age participation model which uses the entire population rather than just high school graduates. Projected WSCH on which the Bond program is based contains 17 district projections under the new technique and the remainder under the old technique. In the 1975 projections, available district by district later this summer, enrollments for all districts will be projected using the new age participation technique.

BOND ANALYSIS

Due to the need for immediate decisions on legislation authorizing a Bond election, Chancellor's Office staff has developed several statewide projections of future college enrollments and instructional loads using the new technique. Data on past, present, and projected population by age and sex were provided by the Population Research Section of the Department of Finance as were actual participation rates (college enrollment/population) for the recent three years.

Analytical Studies staff developed a program to project Community College enrollment statewide using the new technique for the years 1975 through 1995. As shown in Figure 1,* the new technique takes the rates at which males and females in certain age groups enroll in Community Colleges and applies these rates (or more precisely, assumed trends in these rates) to future populations. The latter figures are subject to fluctuating birth, death, and migration trends, but can be projected with a fair degree of confidence. This contrasts with the old technique where the rate at which only a small portion of the population (high school graduates) enroll in colleges as first-time freshmen is determined.

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* All figures and tables referred to in this appendix appear in order beginning with page 56.

Then, using a series of complex ratios (see Figure 2), other students are related to first-time freshmen and these relationships projected.

Since future population by age and sex can be predicted reasonably well, the basic unknowns in analyzing capital outlay needs are future trends in

(1) participation rates by age and sex: how many males/females of a certain age group enroll in a Community College,

(2) student instructional loads: how many WSCH are taken by each student, and

(3) off-campus emphasis: to what extent does instructional activity take place in leased, rented, or gratis off-campus, outreach facilities and thus fall outside the Construction Act and the purpose for which the bond program is being proposed?

A more detailed examination of alternative future trends in participation rates and instructional loads appears below. With one notable exception, projections assume that off-campus activity anticipated in district plans will be realized.

Staff has examined a set of three combined growth assumptions for each of these factors. These growth assumptions range from a set that appears unrealistically conservative (with low enrollment resulting) to one which appears equally unrealistic, but on the side of excess or high enrollment. Intermediate to these is a third growth assumption, termed "reasonable," that appears to describe those future conditions most likely to occur.

Another three analyses are presented to identify extreme values for each of the three factors that could occur and still support the Bond proposal. These clarify limiting conditions within which the proposal may be analyzed. First, it is assumed that trends in future participation and student instructional loads will be reasonable. The maximum increase in off-campus outreach that leaves sufficient on-campus WSCH to support the Bond proposal is then calculated. A second comparison takes off-campus development projected in district plans together with reasonable trends in future participation rates. An estimate is then made of the largest decline in instructional loads (WSCH per student) that could occur by 1980 and still justify the Bond WSCH. Finally, reasonable expectations regarding future instructional loads are combined with district plans for off-campus activity to estimate the lowest participation rates that could occur through 1980 and still justify the Bond WSCH. The three growth assumptions and three comparative analyses are summarized and results examined in turn below.

	Participation Rates	Instruction Loads (WSCH/E)	Off-Campus Activity
GROWTH ASSUMPTIONS			
(A)	Highest Straight line Extrapolation of recent 3 years	Constant 1974 WSCH/E	Districts' Plans
(B)	Reasonable trend	Reasonable trend	Districts' Plans
(C)	Bond Proposal (Districts' 10 year plans)		
(D)	Lowest Constant 1974 rates	Greatest Projected decline in WSCH/E	Districts' Plans
COMPARATIVE ANALYSES			
(1)	"Maximum off-campus Growth" Reasonable trend	Reasonable trend	Derived
(2)	"Minimum instructional loading" Reasonable trend	(derived)	Districts' plans
(3)	"Minimum participation rates" (derived)	Reasonable trend	Districts' plans

The highest or most liberal growth assumption (see A in Figure 3 and Table 1) stipulates that recent three year increases in participation rates will continue though 1983. In addition, instructional loads (WSCH/student) are assumed to remain constant at the 1974 rate, rather than continuing their recent five year decline. Neither assumption appears reasonable in view of the unique character of recent conditions (end of war, unemployment, etc.) and the significant increase in part time enrollment and thus decrease in student instructional loads now occuring. Off-campus activity is assumed to increase as anticipated in districts' 10-year plans.

The result of growth assumption A is 18.6 million WSCH by 1980, about 6 million WSCH or 46 percent more activity than contemplated in the Bond planning. This high assumption produces nearly double the WSCH as does the low assumption D by 1983.

The "reasonable" growth assumption B in Figure 3 and Table I is based upon individual analysis and trending of participation rates for males and females in each age cohort. This includes trends such as a return, in six years, to earlier lower participation rates for males aged 25-29 due to the expected decrease in number of veterans attending Community Colleges. Participation of males aged 30-34 is also adjusted for current effects of veteran attendance. Increased participation on the part of women aged 25-29 is expected to increase but not at recent spectacularly high levels. Contact hour loads are expected to continue at the same rate as the decline experienced during the last seven years.

As shown in Table I, "reasonable" growth results in 13.9 million WSCH by 1980, some 9 percent greater than Bond WSCH. This growth assumption is based upon participation, instructional load, and off-campus activity conditions that of all those examined in this analysis appear most likely to occur.

The low growth assumption, D in Figure 3 and Table I, results in WSCH that are just over half that of high assumption A and 93 percent of that level anticipated for the Bond proposal. This assumption, however, is based on conditions that are quite unlikely to occur. One condition is that participation rates experienced in 1974 continue without change through 1983. In view of recent experience, this is doubtful. Contact hour loads are assumed to decline at the rate of the recent five years; a possible, but unlikely trend that would result from a situation in which about nine of ten students enroll part-time.

In summary, conditions most likely to occur between now and 1980 more than justify the facilities that underly the bond proposal. The proposal of $270 million is based upon 12.7 million WSCH by 1980 of which 12.0 million WSCH are to be housed in existing or funded facilities and 0.7 million WSCH to be accommodated in facilities supported by the program. The most likely conditions or "reasonable" assumption projects 13.9 million WSCH, about 9.3% in excess of that for which Bond facilities are planned.

As noted, the low growth assuming highly unlikely conditions results in a projected WSCH that is 93% of the Bond WSCH. These conditions assume participation rates that are unrealistically lower than recent experience and student instructional loads that would result in few students being enrolled full-time by 1980, also unlikely. The contrasting high growth assumption extrapolates recent three-year participation rates and holds 18.6 million WSCH or 46% more than envisioned in the Bond program. This is equally unreasonable due to the conditions (end of war, unemployment, increased outreach -- particularly with the aged and other nontraditional groups, women's reentry, etc.) under which the recent three-year Community College enrollment increases have occurred. These conditions are not likely to persist to the same degree through 1980 and beyond.

Recognizing the uncertainty of such five-year enrollment projections and use of a new, albeit more accurate, projection technique, staff has examined other alternatives to establish a "range" within which future conditions might vary and still justify the proposed bond program. In essence, staff feels these alternatives are less likely to occur than is the reasonable set, but nonetheless are quite valuable in exploring "what if" questions.

Assuming reasonable trends in participation and student instructional loads, the $270 million proposed would be needed even if off-campus outreach more than doubled by 1980 to the point where it comprised more than 17% of all instruction, rather than the 9% currently (see Table 2). Alternatively, if district plans for outreach are realized and if student instructional loads continue to become lighter (increased part-time enrollment), at a reasonable rate, the Bond program would still be justified by participation rates nearly equal those of 1974, i.e., the most conservative set (see Figure 4). These enrollments, however, are still considerably higher than projected by the BD-240 technique. Finally, even district plans regarding outreach and reasonable assumptions regarding future participation, the bond program is justified by an expected instructional load, falling to less than 9 WSCH per student, that is significantly lower than any of the projections (see Figure 5).

The Bond program is justified as proposed under any reasonable and even some conservatively unreasonable growth assumptions about future college participation, student instructional loads, and off-campus outreach activity.

Even recent policy proposals such as the 3% limitation on ADA increases, whether implemented for one year or indefinitely, result in projections which justify the Bond program under reasonable expectations about participation, instructional loads, and district plans regarding outreach (see Figure 6 and Table 3).

The Bond proposal provides voters with two choices. One choice deals with the method of financing facilities, i.e., to bond or pay as you go. The other choice has to do with projected need: are the facilities really required? The first question is somewhat philosophical while the second is predicated on perceptions about future conditions. At this time, staff is confident that a reasonable projection of future conditions justifies the proposal. If the proposal were authorized by the Legislature and approved by the voters, but future and more refined projections of enrollment indicated the dollars were not needed in the same amount and/or as soon, the bonds needn't be sold or only a portion sold and specific appropriations in the Budget Act withheld. In other words, several constraints exist and may be exercised at a later date in the event that today's projections of future enrollment conditions do not prove to be accurate.

ALTERNATIVE ENROLLMENT PROJECTIONS

Six alternative enrollment projections based on the age participation technique exhibit two major distinctions from BD-240 projections:

1. all sets produce enrollments as high as the BD-240 or higher, especially beyond 1979, and

2. none predicts a major decrease in enrollments in the 1980's and 1990's.

The new technique incorporates recent trends in older age groups as direct inputs into the colleges, therefore future enrollments do not follow the descending curve of projected high school graduates as in BD-240 figures (see Figure 7).

Set #1

Future participation rates by men and women in each of the five age groups are defined by the extrapolated least squares line derived from three years' available data. This assumes that recent trends will continue unchanged indefintely. The likelihood of this occurring is not great.

Projected enrollments reach 3,630,600 students by 1995, a 220% increase over fall 1974 (see Table 4). Because women's participation rates are rising more rapidly than that of men, 55% of the students in 1995 would be female under this set of assumptions, up from 49.2% in fall 1974. Reflecting recent trends, the participation of men under 20 drops more than 6%. The median age of students (men and women combined) increases from 25 to about 32 by 1995.

Set #2

Future participation rates by men and women in each of the five age groups are defined by projecting the succeeding year's rate at 75% of the slope of a least squares line recalculated as each year's rate is determined. This assumes that participation rates in the future will be less than those of recent experience, with the exception of men under 20. Reducing the slope of the least squares lines by 25% each year results in nearly a constant rate condition.

Projected enrollments reach 2,528,000 students by 1995, a 123% increase over fall 1974 (see Table 5). Sex composition by then is 54% women and 46% men. Median age shifts from the current 25 to 30 years of age by 1995. Participation rate of men under 20 drops only 3.5%.

Although this set of projected enrollments is almost 1/3 less than Set #1 by 1995, it also is considered unrealistically high.

Set #3

This set of enrollment projections is a revised version of Set #2 assuming a greater future deviation from recent trends. Each succeeding year's participation rate was projected at half the slope of the least squares line. A new least squares line is computed each time including the latest determined value.

Projected enrollments reach 1,874,600 students by 1995, a 65% increase over fall 1974 (see Table 6). Women constitute 52.4% of total students and the median age of all students is 29. Participation rate of men under 20 drops only slightly over 1%.

Conceptionally, this headcount projection could be viewed as an acceptable set of planning figures.

Set #4

These enrollment projections differ from the others in that each age-sex category was analyzed and future rates determined to conform with what is considered to be a "reasonable" level of participation. Rather than applying a general rule to all categories, rates in this set were adjusted not only for recent trends, but also for such eventual affects as the end of the veterans influx and women's rates reaching some level of stability.

For example, the participation rate of males 25-29 years of age is reduced over a six-year period to a level approximating the lowest known rate (fall 1972). To compensate for the effect of male veterans currently in the 30-34 age group the rate of participation is kept at the fall 1974 level over time, even though this rate increased 18% from fall 1972. Rates for other male categories have been held constant at the 1974 level also, with the exception of the 35+ category which is allowed to increase at the 1/2 least squares line rate used in Set #3.

Women's rates are at or slightly above the men's rates, except for participation of women under 20 which increases at 1/2 least squares line and participation of women 35+ which rises at a decreasing rate until 1985 when it is then kept constant.

Projected enrollments reach 1,686,200 students by 1995, a 48.6% increase over fall 1974 (see Table 7). Women comprise 54% of the student then after a high of 55% in 1985. Median age for all is 30 by 1995.

Although growth is moderate beyond 1983, at no time does a drop enrollment decline.

Set #5

This set was prepared recently by the Department of Finance to illustrate the new technique. It assumes that participation rates, with the exception of the rates for males under 20 and 25-29 (held constant at the fall 1974 level), rise at the least squares slope for the first year of the projection, 1/2 least squares line the following year, and then constant over time.

This somewhat unsophisticated approach is obviously conservatively drawn.

Projected enrollments reach 1,459,100 students by 1995, a 28.6% increase over fall 1974 (see Table 8). Male-female composition stabilizes in 1976 at 49%-51%; median age is 28 in 1995.

Enrollments remain relatively stable from 1984 through 1992 and then begin to increase.

Set #6

This set was also prepared by the Department of Finance to illustrate the new technique. It ignores recent trends altogether and assumes that all age-sex participation rates will remain constant at fall 1974 levels, a seemingly unrealistic assumption.

Projected enrollments reach 1,324,100 students by 1995, a 16.7% increase over fall 1974 (see Table 9). Because of the current male-female composition of students, this is the only projection in which women do not outnumber men. Median age is 28 by 1995. Enrollments remain relatively stable beyond 1983.

The merit in presenting either these figures or those in Set #5 is to illustrate the fact that any rational projection of enrollments utilizing an age-sex participation technique will exceed BD-240 results, especially in the 1980's.

All these projections were developed by applying participation rates shown in Tables 4 through 9 to present and projected population data shown in Tables 10 and 11.

ALTERNATIVE INSTRUCTIONAL LOADS

To highlight the importance of future instructional loads (WSCH per student), eight alternative assumptions concerning this factor have been developed (see Figure 8) and applied to the "reasonable assumptions on participation rates" enrollment projections (see Figure 9). When combined with a "reasonable" participation rate assumption, every alternative for WSCH per student produces a total that significantly exceeds both the Bond WSCH as well as BD-240 WSCH.

Derivation of the hour load alternatives is described below.

Set #1

Future WSCH per student is defined by the extrapolated least squares line derived from data reported for the years 1968-69 through 1973-74 and the Department of Finance revised estimate for 1974-75. This assumes the downward trend in WSCH per student of the last seven years will continue unchanged into the future, a conservative approach which could be considered a low "reasonable" set.

In order to obtain a longer historical perspective the Department of Finance analyzed data for 1963-64 and found the factor then to be 9.32 hours per student.

In 1968-69, WSCH per student were 10.41. The Department of Finance estimate for 1974-75 is 10.11 per student. Under this assumption this factor decreases to 8.43 hours per student by 1995-96 (see Table 12). In the longer perspective, what is seen as declining hours per student may be merely a return to a pre-Vietnam War level of student workload.

Set #2

This projection of future WSCH per student is derived from the extrapolated least squares slope for the five years 1970-71 through 1974-75. This represents the decline in hours per student from the highest reported factor of 10.65 in 1970-71, the most pessimistic view of future hour loading and perhaps unlikely since factors for 1969-70 and 1970-71 were unusually high. Effects of draft deferments are no longer operative and should not be projected into the future.

By 1995-96 the factor drops to 7.38 WSCH per student. The implications of a factor of this magnitude for both facilities and operating budget, assuming the extreme number of defined adults implied, are quite serious.

Set #3

Future WSCH per student is defined in this set by the extrapolated least squares line derived from data for the four years 1971-72 through 1974-75. This reflects student workload activity since the Vietnam War began to wind down. Although 1971-72 data likely are still biased by draft deferment requirements, WSCH per student has been relatively stable the last three years. This set appears "reasonable" for long-range projecting.

By 1995-96 the WSCH per student factor has declined to 9.06 hours per student, about 3% below the 1963-64 level.

Set #4

Future WSCH per student is defined by:

(a) extrapolating 75% of the slope of the least squares line recalculated each year, and

(b) seven years of base data.

This set assumes a smaller decline in the factor over time than Set #1 and may be considered a possible alternative "reasonable" assumption.

The result is a set of factors quite similar to those in Set #3, but based on different assumptions. By 1995-96 the factor decreases to 9.03 WSCH/student.

Set #5

This set is derived by

(a) extrapolating 75% of the slope of the least squares line, recalculated each year and

(b) four years of base data.

This assumes a smaller decline in the factor than Set #3, possibly a high "reasonable" assumption.

By 1995-96 the factor has dropped to 9.45, which is 1.4% higher than the 1963-64 level.

Set #6

Here, future WSCH per student is defined by:

(a) extrapolating 50% of the slope of the least squares line, recalculated each year, and

(b) seven years of base data, assuming higher factors than Set #4. The 1995-96 result is 9.56 WSCH/student.

Set #7

Future WSCH per student is defined by:

(a) extrapolating 50% of the slope of the least squares line, recalculated each year, and

(b) four years of base data.

This assumes higher factors than Set #5 with the 1995-96 WSCH/student at 9.80.

Set #8

Future WSCH per student will remain constant at the estimated 1974-75 level. The result is 10.11 hours per student per week over time.

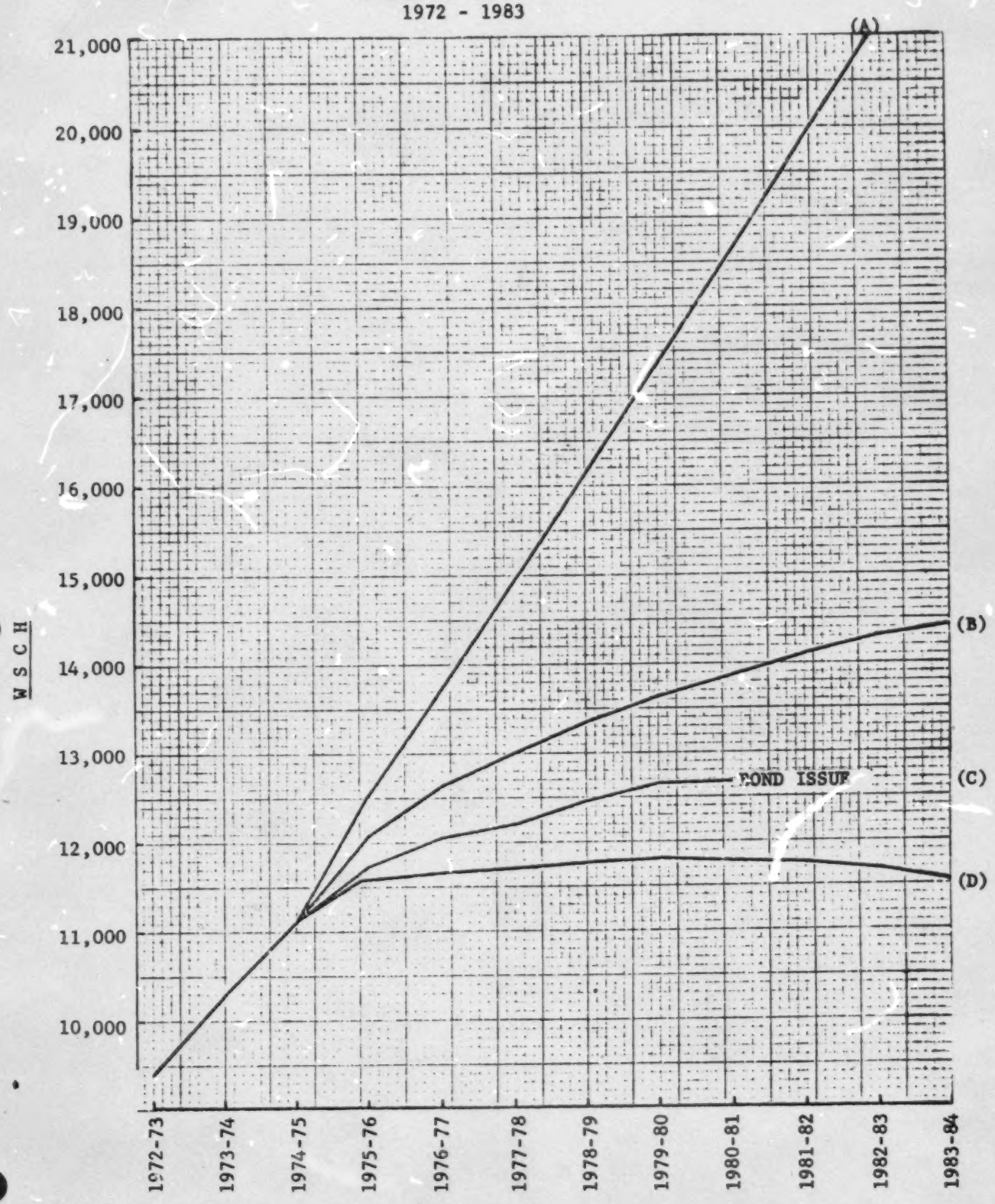
Figure 1
COMPARISON OF BD-240 AND
AGE PARTICIPATION PROJECTION TECHNIQUES

Figure 2

BD-240 PROJECTION TECHNIQUE

Figure 3

COMMUNITY COLLEGES
HIGH, REASONABLE, AND LOW
GROWTH ASSUMPTION SETS
1972 - 1983

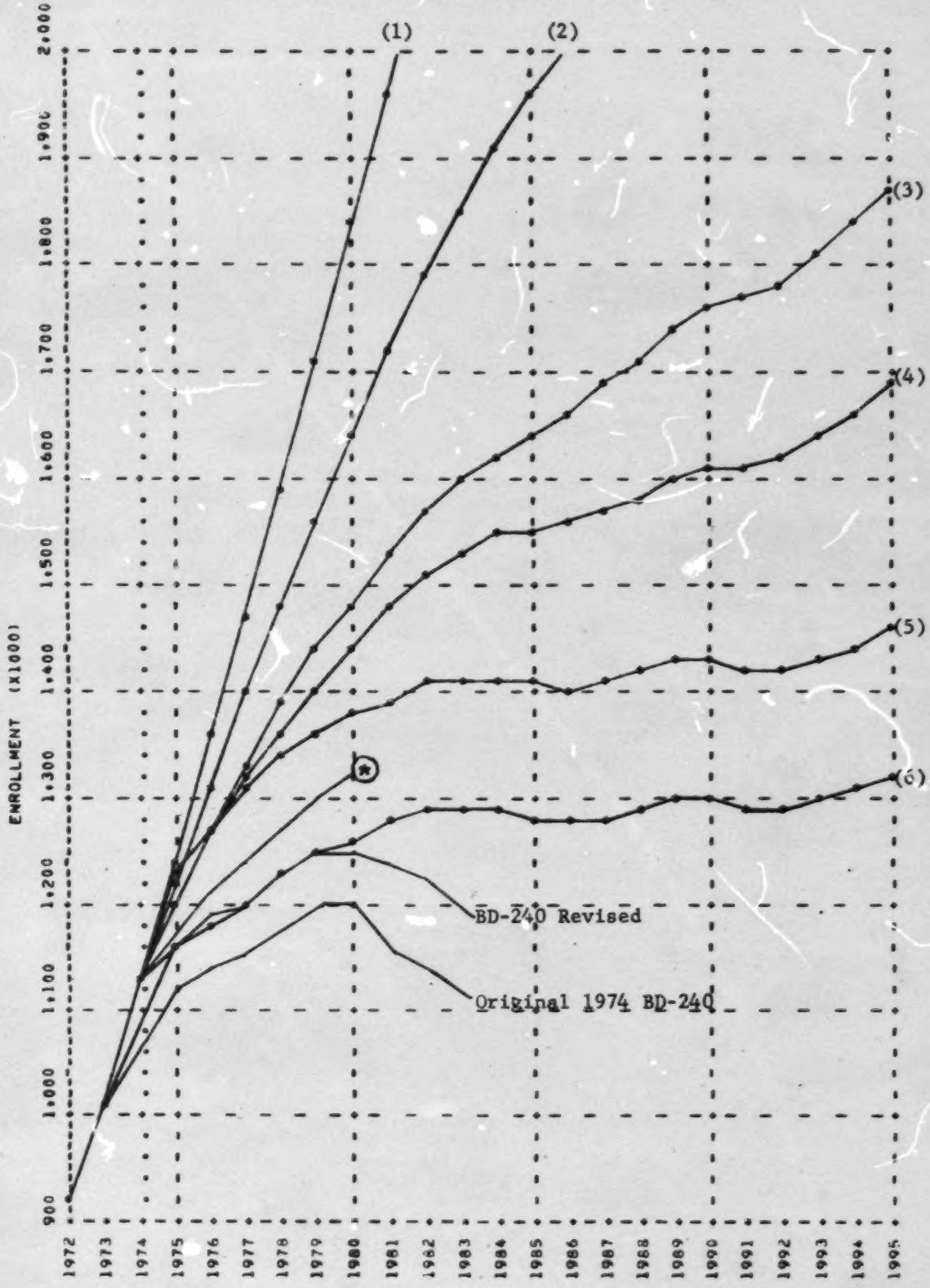


SOURCE: See Table 1.

Figure 4

COMMUNITY COLLEGES

ALTERNATIVE ENROLLMENT PROJECTIONS

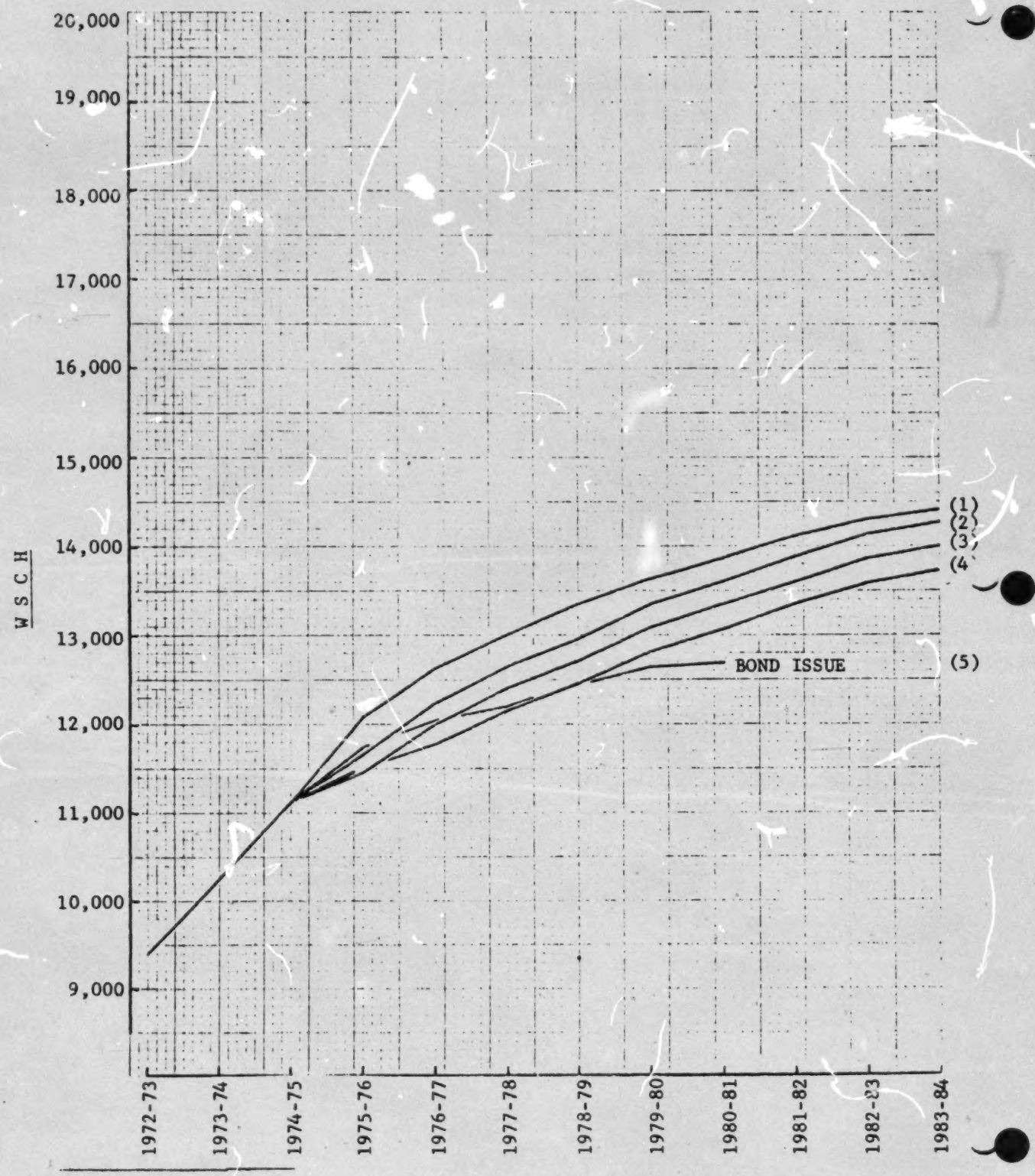


(*) Lowest enrollment that supports bond proposal given (a) reasonable WSCH/Enrollment and (b) district plans for off-campus activity.

SOURCE: See Tables 4 through 9.

Figure 5
COMMUNITY COLLEGES
PROJECTED STUDENT
INSTRUCTIONAL LOADS
1963 - 1995

Figure 6
COMMUNITY COLLEGES
PROJECTED IMPACT OF ADA CEILING
1975 - 1983

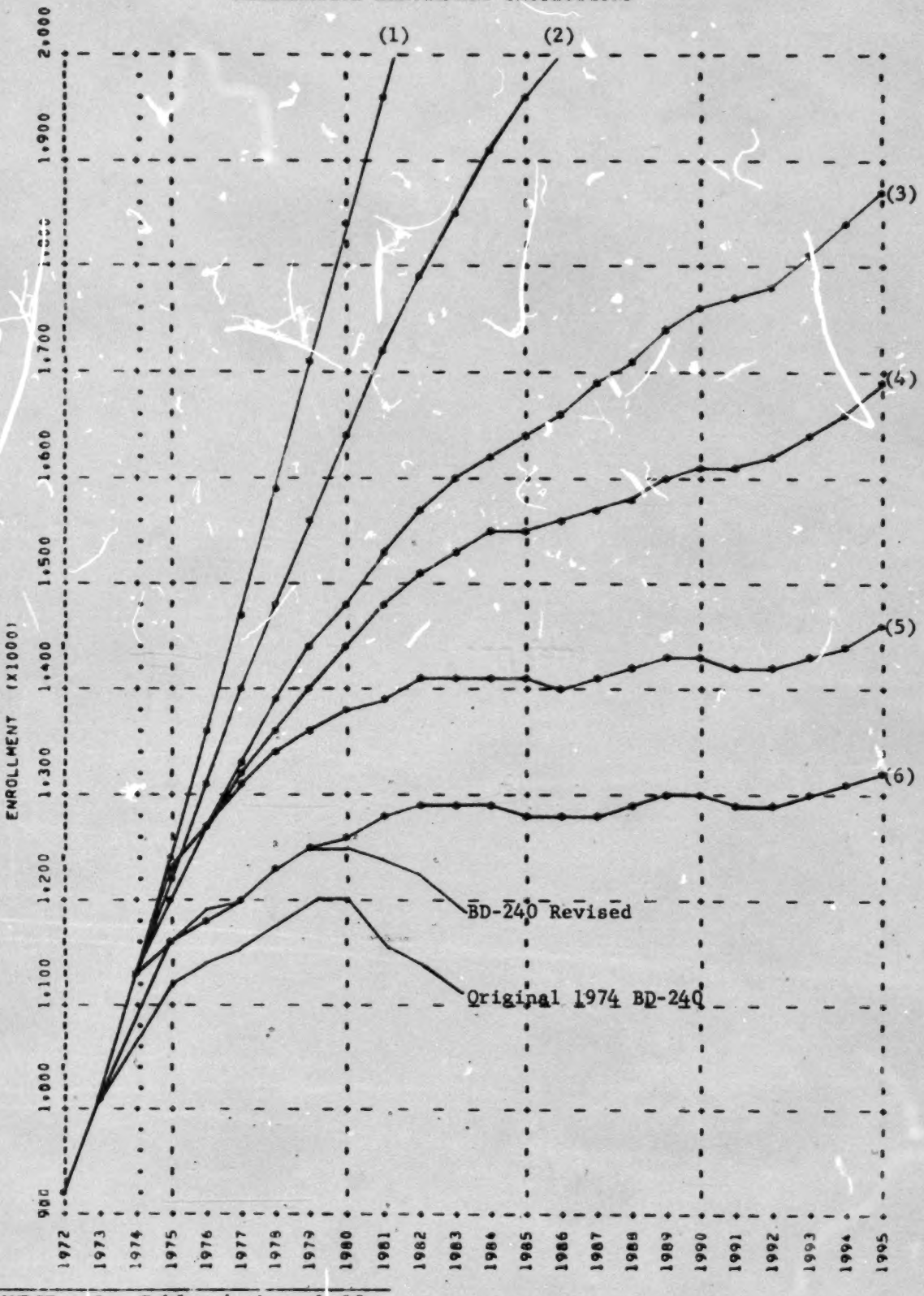


SOURCE: See Table 3.

Figure 7

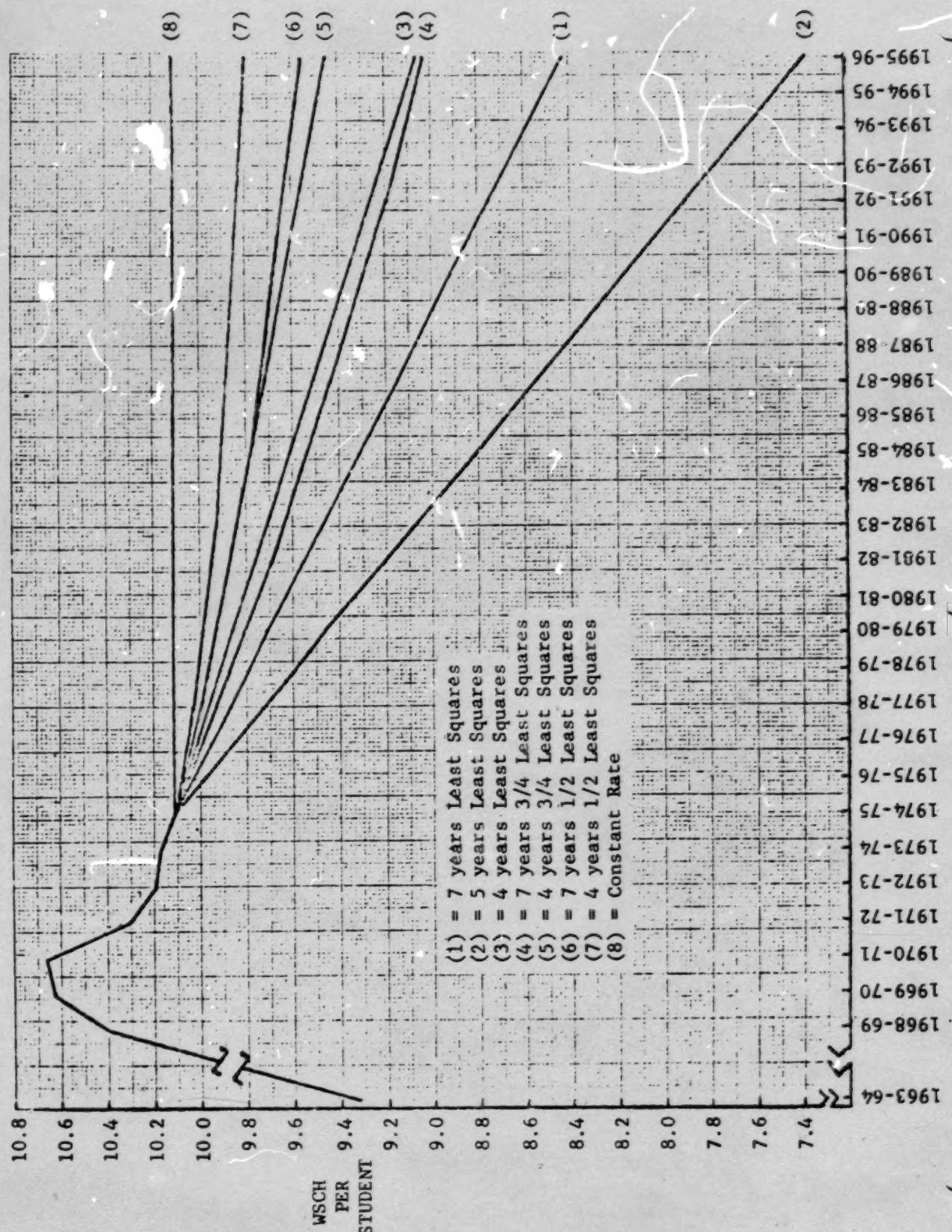
COMMUNITY COLLEGES

ALTERNATIVE ENROLLMENT PROJECTIONS



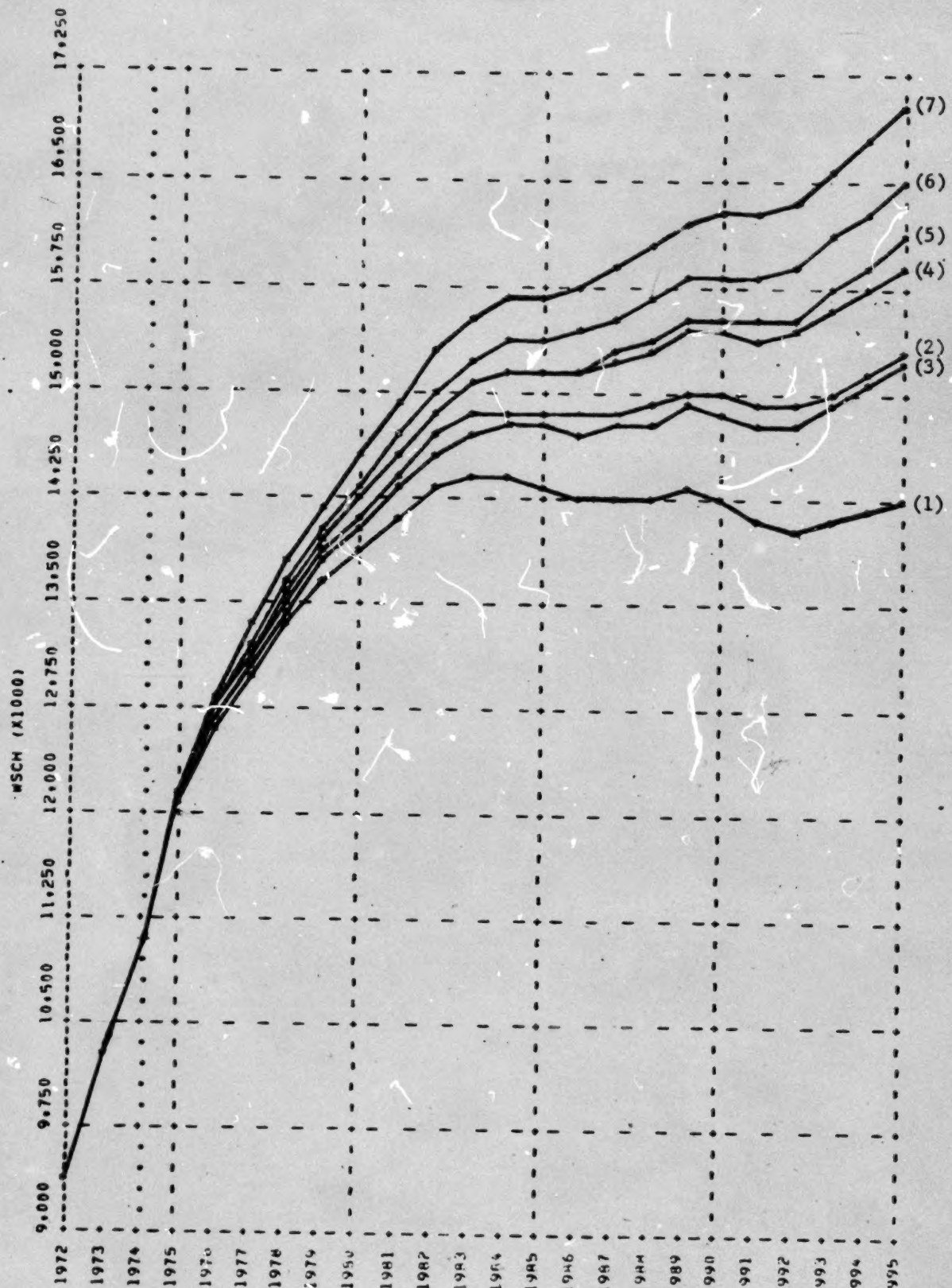
SOURCE: See Tables 4 through 10.

Figure 8
COMMUNITY COLLEGES
ALTERNATIVE INSTRUCTIONAL LOADS
1963 to 1995



SOURCE: Table 12.

Figure 9
COMMUNITY COLLEGES



SOURCE: Table 13.

Table 1
COMMUNITY COLLEGES
HIGH, REASONABLE, AND LOW
GROWTH ASSUMPTIONS
1975 - 1983
(Statewide WSCH)

Year	Highest Growth Assumption (Enrollment set #1 and WSCH set #8)	Reasonable Growth Assumption (Enrollment set #4 and WSCH set #1)	Bond Issue (Districts' 10 year plans)	Lowest Growth Assumption (Enrollment set #6 and WSCH set #2)
	A	B	C	D
1975-76	12,525,279	12,077,123	11,723,057	11,549,854
1976-77	13,699,050	12,617,595	12,035,551	11,641,715
1977-78	14,872,821	12,997,803	12,203,607	11,697,048
1978-79	16,098,153	13,335,938	12,44[illegible],956	11,759,258
1979-80	17,329,551	13,631,869	12,643,865	11,788,106
1980-81	18,556,905	13,858,533	12,677,426	11,769,795
1981-82	19,810,545	14,102,485	-	11,743,800
1982-83	21,043,965	14,306,329	-	11,671,276
1983-84	22,235,934	14,410,833	-	11,542,434

SOURCE: Tables 4, 7, 9, and 12.

Table 2
"MAXIMUM" WEEKLY STUDENT CONTACT HOURS, OFF-CAMPUS
TOTAL, OFF-CAMPUS: BD-240, DERIVED;
1973 to 1980

YEAR	BOND ISSUE			CHANCELLOR'S OFFICE - REASONABLE ASSUMPTION 1/		
	TOTAL WSCH	ADJUSTED FOR OFF-CAMPUS	% OFF CAMPUS	TOTAL WSCH	RESIDUAL OFF-CAMPUS	
					NUMBER	%
1973-74	10,274,214	9,398,488	8.52%	-	-	-
1974-75	11,101,478	10,072,485	9.27%	-	-	-
1975-76	11,723,057	10,622,902	9.38%	12,077,123	1,454,221	12.0%
1976-77	12,035,551	10,897,535	9.46%	12,617,595	1,720,060	13.6%
1977-78	12,203,607	11,059,711	9.37%	12,997,803	1,938,092	14.9%
1978-79	12,448,956	11,271,082	9.46%	13,335,938	2,064,856	15.5%
1979-80	12,643,865	11,436,862	9.55%	13,631,869	2,195,007	16.1%
1980-81	12,677,426	11,466,914	9.55%	13,858,533	2,391,619	17.3%

1/ Based on "reasonable" participation rates (Set #4) and WSCH/Enrollment, (Set #1); Tables 7 and 12.

Table 3
COMMUNITY COLLEGES
IMPACT OF POSSIBLE LIMIT
ON ADA/WSCH GROWTH
(1975 - 1983)

Year	Reasonable Assumptions (Enr. set 4, WSCH set 1)	Five Percent Cap (1 year and permanent)	Three Percent Cap (1 year only)	Three Percent Cap (permanent)	Bond Issue (Districts' 10 year plans)
	1	2	3	4	5
1975-76	12,077,123	11,664,731	11,442,545	11,442,546	11,723,057
1976-77	12,617,595	12,223,472	11,990,843	11,785,822	12,035,551
1977-78	12,997,803	12,630,459	12,390,085	12,139,397	12,203,607
1978-79	13,335,938	12,951,199	12,704,721	12,447,667	12,448,956
1979-80	13,631,869	13,329,691	13,076,010	12,811,444	12,643,865
1980-81	13,858,533	13,594,617	13,335,894	13,066,070	12,677,426
1981-82	14,102,485	13,875,710	13,614,580	13,339,117	-
1982-83	14,306,329	14,125,521	13,856,694	13,576,332	-
1983-84	14,410,833	14,276,036	14,004,345	13,720,995	-

SOURCE: Tables 4 - 9, 12.

CALIFORNIA POPULATION
STATE TOTAL - MALES BY AGE GROUP

Year	(18-64)	(18-19)	(20-24)	(25-29)	(30-34)	(35-64)
1972	5,968,950	391,870	937,030	820,150	675,330	3,144,570
1973	6,077,660	396,200	958,000	847,450	712,440	3,163,570
1974	6,173,490	401,110	979,620	866,320	742,900	3,183,540
1975	6,273,560	405,540	1,001,440	888,910	769,470	3,208,200
1976	6,391,880	411,650	1,029,550	914,520	794,570	3,241,590
1977	6,509,120	415,780	1,051,970	929,990	829,010	3,282,370
1978	6,630,790	423,220	1,069,710	957,880	846,030	3,333,950
1979	6,746,690	426,020	1,083,310	990,530	864,470	3,382,360
1980	6,859,090	420,120	1,098,760	1,020,150	891,540	3,428,520
1981	6,970,470	416,240	1,108,110	1,048,840	917,650	3,479,630
1982	7,076,690	409,760	1,112,540	1,071,470	934,060	3,548,860
1983	7,170,300	395,340	1,111,790	1,089,110	963,150	3,610,910
1984	7,249,140	373,940	1,105,510	1,102,510	996,850	3,670,330
1985	7,315,080	355,200	1,082,800	1,117,670	1,027,420	3,731,990
1986	7,377,860	346,040	1,052,230	1,126,660	1,056,930	3,796,000
1987	7,445,170	349,750	1,016,660	1,130,470	1,080,100	3,868,190
1988	7,522,400	363,780	980,730	1,128,980	1,098,090	3,950,820
1989	7,607,880	380,980	955,170	1,121,950	1,111,660	4,038,120
1990	7,675,750	372,470	947,810	1,098,110	1,127,070	4,130,290
1991	7,732,870	341,850	961,660	1,066,290	1,136,240	4,226,830
1992	7,806,270	343,230	965,480	1,029,310	1,139,970	4,328,280
1993	7,886,610	365,810	958,270	992,090	1,138,200	4,432,240
1994	7,974,660	382,490	959,630	965,640	1,130,750	4,536,150
1995	8,067,330	400,160	960,510	958,030	1,106,150	4,642,480
2000	8,656,140	480,840	1,122,210	970,840	961,480	5,120,770

SOURCE: Population Research, Department of Finance.

Table 11
CALIFORNIA POPULATION
STATE TOTAL - FEMALES BY AGE GROUP

Year	(18-64)	(18-19)	(20-24)	(25-29)	(30-34)	(35-64)
1972	6,091,170	378,900	907,420	821,630	666,570	3,316,650
1973	6,218,280	384,310	932,030	850,980	707,410	3,343,550
1974	6,338,780	391,670	955,700	878,410	741,550	3,371,450
1975	6,458,300	397,260	977,800	910,030	770,890	3,402,320
1976	6,577,530	402,740	1,003,430	930,640	802,080	3,438,640
1977	6,695,780	405,940	1,024,600	939,320	842,510	3,483,410
1978	6,816,410	412,540	1,042,110	954,060	869,980	3,537,720
1979	6,931,550	414,780	1,056,460	971,960	898,870	3,589,480
1980	7,042,610	409,400	1,070,750	993,440	928,970	3.640,050
1981	7,152,040	405,400	1,079,190	1,019,980	949,910	3,697,560
1982	7,256,320	399,430	1,082,220	1,041,680	959,710	3,773,280
1983	7,347,780	386,230	1,081,040	1,059,350	975,830	3,845,330
1984	7,421,810	365,010	1,074,750	1,073,630	994,930	3,913,490
1985	7,481,390	345,580	1,053,530	1,087,810	1,017,470	3,977,000
1986	7,538,280	335,720	1,023,700	1,096,030	1,044,780	4,038,050
1987	7,608,030	340,120	998,360	1,098,540	1,067,100	4,103,910
1988	7,664,850	354,330	952,470	1,096,630	1,085,090	4,176,330
1989	7,738,640	370,350	927,330	1,089,530	1,099,560	4,251,870
1990	7,793,980	361,980	919,100	1,067,020	1,114,100	4,331,780
1991	7,869,250	332,150	932,180	1,035,630	1,122,400	4,446,890
1992	7,901,500	333,440	935,990	998,620	1,124,630	4,508,820
1993	7,972,950	355,500	929,480	961,060	1,122,380	4,604,530
1994	8,053,550	371,820	930,090	934,610	1,114,750	4,702,280
1995	8,138,690	389,090	930,880	925,920	1,091,270	4,801,530
2000	8,709,510	467,960	1,089,900	938,400	945,430	5,267,820

SOURCE: See Table 10.

Table 12
COMMUNITY COLLEGE
PROJECTED ANNUAL AVERAGE WSCH
PER TOTAL ENROLLMENT
1975-76 through 1995-96

Year	Unmodified Least Squares			75% Least Squares		50% Least Squares		Constant
	7 years' base data	5 years' base data	4 years' base data	7 years' base data	4 years' base data	7 years' base data	4 years' base data	
	1	2	3	4	5	6	7	8
1975-76	10.03	9.98	10.06	10.05	10.07	10.07	10.08	10.11
1976-77	9.95	9.85	10.01	9.99	10.03	10.03	10.05	
1977-78	9.87	9.72	9.96	9.93	9.99	9.99	10.03	
1978-79	9.79	9.59	9.91	9.87	9.96	9.96	10.01	
1979-80	9.71	9.46	9.86	9.81	9.93	9.93	9.99	
1980-81	9.63	9.33	9.81	9.75	9.90	9.90	9.97	
1981-82	9.55	9.20	9.76	9.69	9.87	9.87	9.95	
1982-83	9.47	9.07	9.71	9.64	9.84	9.84	9.93	
1983-84	9.39	8.94	9.66	9.59	9.81	9.81	9.92	
1984-85	9.31	8.81	9.61	9.61	9.78	9.78	9.91	
1985-86	9.23	8.68	9.56	9.49	9.75	9.76	9.90	
1986-87	9.15	8.55	9.51	9.44	9.72	9.74	9.89	
1987-88	9.07	8.42	9.46	9.39	9.69	9.72	9.88	
1988-89	8.99	8.29	9.41	9.34	9.66	9.70	9.87	
1989-90	8.91	8.16	9.36	9.29	9.63	9.68	9.86	
1990-91	8.83	8.03	9.31	9.24	9.60	9.66	9.85	
1991-92	8.75	7.90	9.26	9.19	9.57	9.64	9.84	
1992-93	8.67	7.77	9.21	9.15	9.54	9.62	9.83	
1993-94	8.59	7.64	9.16	9.11	9.51	9.60	9.82	
1994-95	8.51	7.51	9.11	9.07	9.48	9.58	9.81	
1995-96	8.43	7.38	9.06	9.03	9.45	9.56	9.80	

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Table 13
COMMUNITY COLLEGES
Projected Weekly Student Contact Hours
Based on Reasonable Participation Rates (Set #4)
1975-76 through 1995-96

Year	Unmodified Least Squares		75% Least Squares		50% Least Squares		Constant Rate (10.11)
	7 years' base data	4 years' base data	7 years' base data	4 years' base data	7 years' base data	4 years' base data	
	1	2	3	4	5	6	7
1975-76	12,077,123	12,113,246	12,101,205	12,125,287	12,125,287	12,137,328	12,173,451
1976-77	12,617,595	12,693,681	12,668,319	12,719,043	12,719,043	12,744,405	12,820,491
1977-78	12,997,803	13,116,324	13,076,817	13,155,831	13,155,831	13,208,507	13,313,859
1978-79	13,335,938	13,449,402	13,444,914	13,567,512	13,567,512	13,567,512	13,771,842
1979-80	13,631,869	13,842,454	13,772,259	13,940,727	13,940,727	14,024,961	14,193,429
1980-81	13,858,533	14,117,571	14,031,225	14,247,090	14,247,090	14,347,827	14,549,301
1981-82	14,102,485	14,412,592	14,309,223	14,575,029	14,575,029	14,693,165	14,929,437
1982-83	14,306,329	14,668,897	14,563,148	14,865,288	14,865,288	15,001,251	15,273,177
1983-84	14,410,833	14,825,202	14,717,773	15,055,407	15,055,407	15,224,224	15,515,817
1984-85	14,412,811	14,877,241	14,768,874	15,140,418	15,140,418	15,341,671	15,651,291
1985-86	14,344,243	14,857,196	14,748,409	15,152,475	15,168,016	15,385,590	15,711,951
1986-87	14,260,275	14,821,335	14,712,240	15,148,620	15,179,790	15,413,565	15,756,435
1987-88	14,244,435	14,856,930	14,746,995	15,218,145	15,265,260	15,516,540	15,877,755
1988-89	14,247,352	14,912,968	14,802,032	15,309,168	15,372,560	15,641,976	16,022,328
1989-90	14,294,313	15,016,248	14,903,947	15,449,409	15,529,624	15,818,398	16,219,473
1990-91	14,216,300	14,989,100	14,876,400	15,456,000	15,552,600	15,858,500	16,277,100
1991-92	14,070,875	14,890,080	14,777,520	15,388,560	15,501,120	15,822,720	16,256,880
1992-93	14,018,523	14,891,649	14,794,635	15,425,226	15,554,578	15,894,127	16,346,859
1993-94	14,079,010	15,013,240	14,931,290	15,586,890	15,734,400	16,094,980	16,570,290
1994-95	14,140,216	15,137,176	15,070,712	15,751,968	15,884,896	16,300,296	16,798,776
1995-96	14,214,666	15,276,972	15,226,386	15,934,590	16,120,072	16,524,760	17,047,482